

## Electric Discharge

**Electric discharge** involves the removal of excess electric charges from a charged object. There are several ways to accomplish this.

### GROUNDING

- the charged object is connected to the ground by a wire and metal rod
- the excess charges are distributed over the entire Earth (**grounded**)
- eg. gas pumps are grounded so any excess electric charge is immediately conducted to the Earth

### DISCHARGE AT A POINT

- smooth, spherical objects hold onto excess electric charges well because the charges spread evenly over the surface
- pointed objects accumulate electric charges at the tip, and lose these charges rapidly if they are conductors, due to repulsion
- eg. planes have pointed metal rods extending from the wings and tail to allow a continuous discharge of static electricity

### DISCHARGE OVER TIME

- charged objects will discharge over long periods of time
- on humid days, water in the air picks up excess charges easily
- eg. on cold dry days, when humidity is low, excess charges tend to remain and do not discharge to the air